

CLAIMS

1. The invention relates to a composition for the detection of traces of human or animal blood. The aforementioned composition comprises a luminol
5 compound, an oxidising agent and a base which are diluted in a preferably aqueous solvent. Said composition is characterized in that :

- the luminol compound is present in a quantity providing a concentration of between 1 and 20 mmoles/l in the end composition,
- the oxidizing agent is hydrogen peroxide which is present in a
10 concentration of between 25 and 100 mmoles/l in the end composition,
- the base is soda, NaOH, which is present in a concentration of between 25 mmoles/l and 500 mmoles/l in the end composition.

2. Composition in accordance with subject claim 1, characterised in
15 that the luminol compound is selected from amongst luminol, diethyl isoluminol, and aminobutylethyl isoluminol.

3. Composition in accordance with subject claim 1 or 2, characterised in that soda, NaOH, is present in a concentration of between 25 and
20 150 mmoles/l in the end composition.

4. Composition in accordance with subject claim 1 or 2, characterised in that soda, NaOH, is present in a concentration of between 25 and 50 mmoles/l or of about 90 mmoles/l in the end composition.

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5. Composition in accordance with any one of the preceding subject claims, characterised in that the aqueous solvent is water, and its being non-carbonated water.

30 6. Utilisation of the composition in accordance with any one of the preceding subject claims for the detection of traces of human or animal blood.

7. Utilisation of the composition in accordance to subject claim 3 for the detection of traces of animal blood on hunting grounds.

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8. Utilisation of the composition in accordance with subject claim 4 for the detection of traces of human blood at the scene of a crime or of an accident.

9. A field kit for the preparation of the composition according to any one of the subject claims 1 to 5, characterised in that this kit contains:
- in a first receptacle, at least an individual dosage of luminol compound in a quantity ranging between 1 and 20 mmoles;
 - in a second receptacle, at least an individual dosage containing between 25 and 100 mmoles of hydrogen peroxide, and
 - in a third receptacle, at least an individual dosage containing between 25 and 500 mmoles of soda, NaOH.

10. A field kit in accordance with subject claim 9, characterised in that this kit contains:
- in a first receptacle, at least an individual dosage containing a luminol compound in a supply quantity of 1 to 10 mmoles of luminol,
 - in a second receptacle, at least an individual dosage containing between 25 and 100 mmoles of hydrogen peroxide, and
 - in a third receptacle, at least an individual dosage containing between 25 and 150 mmoles of soda, NaOH.

11. A field kit in accordance with subject claim 9 or 10, in particular for utilisation at the scene of a crime, characterised in that this kit contains:
- in a first receptacle, at least an individual dosage containing a luminol compound in a quantity sufficient to provide approximately 5 mmoles,
 - in a second receptacle, at least an individual dosage containing approximately 50 mmoles of hydrogen peroxide, and
 - in a third receptacle, at least an individual dosage containing between 25 and 50 mmoles of soda, NaOH.

12. A field kit for the preparation of the composition in accordance with any one of the subject claims 1 to 5, characterised in that this kit contains:
- in a first receptacle, at least an individual dosage containing the mentioned luminol compound in a quantity sufficient to provide between 1 and 20 mmoles

in a pre-mixture with either soda, NaOH, in a quantity of between 25 and 500 mmoles, or with 25 to 100 mmoles of hydrogen peroxide, in a solid compatible form;

- in a second receptacle, at least an individual dosage containing between 25 and 100 mmoles of hydrogen peroxide, or between 25 and 500 mmoles of soda, in accordance with the pre-mixture in the first receptacle.

13. A field kit for the preparation of a composition in accordance with subject claim 3, characterised in that this kit contains:

- in a first receptacle, at least an individual dosage containing a luminol compound in a quantity sufficient to provide approximately 5 mmoles in a pre-mixture with either 25 to 150 mmoles of soda, NaOH, or 50 mmoles of hydrogen peroxide, in a solid compatible form, and
- in a second receptacle, at least an individual dosage containing 50 mmoles of hydrogen peroxide, or between 25 and 150 mmoles of soda, NaOH, in accordance with the pre-mixture in the first receptacle.

14. A field kit for the preparation of a composition in accordance with subject claim 4, characterised in that this kit contains:

- in a first receptacle, at least an individual dosage containing a luminol compound in a quantity sufficient to provide approximately 5 mmoles in a mixture with either 25 to 50 mmoles, or 90 mmoles of soda, NaOH, or 50 mmoles of hydrogen peroxide, in a solid compatible form, and
- in a second receptacle, at least an individual dosage containing either 50 mmoles of hydrogen peroxide, or between 25 and 50 mmoles, or 90 mmoles of soda, NaOH.

15. A field kit in accordance with any one of the subject claims 9 to 14, characterised in that each receptacle is a resealable receptacle made of plastic material or of glass.

16. A field kit in accordance with any one of the subject claims 9 to 14, characterised in that at least one receptacle – or all of the receptacles – is formed by an alveolus fitted inside at least one blister pack.

17. A field kit for the preparation of the composition in accordance with any one of the subject claims 1 to 5, characterised in that it contains at least one blister pack with a minimum of three alveoli, one of which containing an individual dosage holding a luminol compound in a quantity sufficient to provide
5 between 1 and 20 mmoles, another of these three alveoli containing an individual dosage holding between 25 and 500 mmoles of soda, NaOH, and the third one of these three alveoli containing an individual dosage holding between 25 and 100 mmoles of hydrogen peroxide.

10 18. A field kit for the preparation of the composition in accordance with any one of the subject claims 1 to 5, characterised in that it contains either a blister pack and a minimum of two alveoli, one of these two alveoli containing an individual dosage of a luminol compound in a quantity sufficient to provide
15 between 1 and 20 mmoles in a pre-mixture with either soda, NaOH, in a quantity of between 25 and 500 mmoles, or with 25 to 100 mmoles of hydrogen peroxide in solid compatible form; and the second one of these two required alveoli containing an individual dosage with either a quantity of between 25 and 100 mmoles of hydrogen peroxide, or of 25 to 500 mmoles of soda depending on the first pre-mixture; or at least one blister pack containing at least one alveolus
20 with a pre-mixture of the above-mentioned three basic components.

19. A field kit in accordance with any one of the subject claims 9 to 18, characterised in that at least one of the individual dosages is in the form of a pill.

25 20. A field kit in accordance with any one of the subject claims 8 to 19, characterised in that every one of the individual dosages is in the form of a pill.

30 21. A field kit in accordance with any one of the subject claims 9 to 20, characterised in that the individual dosage further contains excipients to facilitate the direct crushing of the pill in order to avoid the formation of moist granulation due to the presence of NaOH, such as lactose, cellulose, calcium phosphate; it also contains excipients that will facilitate the disintegration of the pill, such as
35 croscarmellose, explotab.

22. A field kit in accordance with any one of the subject claims 9 to 21, characterised in that the luminol compound is luminol.

5 23. A field kit in accordance with any one of the subject claims 9 to 22, characterised in that the three components luminol, soda, and hydrogen peroxide have been formulated in a single pre-mixture in formulations that allow their compatibility without generating a premature reaction, thus making it possible to enclose them jointly in one single receptacle.

10 24. Procedure of reconstitution of the composition in accordance with any one of the subject claims 1 to 5, characterised in that it consists of a dilution in water of an individual dosage of a luminol compound, an individual dosage of soda, or an individual dosage of a mixture of a luminol compound and soda, and
15 an individual dosage of hydrogen peroxide, taken from the receptacles of the kit in accordance with any one of the subject claims 9 to 23.

25 25. Procedure of search and localisation of a wounded or struck down animal in conditions of reduced visibility, characterised in that the composition is
20 vaporised in accordance with any one of the subject claims 1 to 5, or the composition obtained in accordance with the procedure in accordance with the subject claim 24, on the areas of the terrain where the animal is assumed to have passed, in order to produce a luminous reaction through the contact of the composition with the blood traces left behind by the hunted animal:

25 26 Procedure of search and localisation of traces of human blood at the scene of a crime or of an accident in conditions of reduced visibility, characterised in that the composition is vaporised in accordance with any one of the subject claims 1 to 5, or the composition obtained in accordance with the
30 subject claim 24, vaporised on the mentioned scene, in order to produce a luminous reaction through the contact of the composition with the traces of human blood.